

# THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica** 

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Nashville 2960 Foster Creighton Drive Nashville, TN 37204 Tel: (615)726-0177

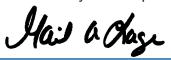
TestAmerica Job ID: 490-48456-1

Client Project/Site: Everett Terminal - Outfall 01 A

For:

Exxon Global Remed. Grp 52 Beacham Street Everett, Massachusetts 02149

Attn: Mallory Stanhope



Authorized for release by: 3/28/2014 4:14:44 PM

Gail Lage, Senior Project Manager (615)301-5741 gail.lage@testamericainc.com

#### ·····LINKS ······

Review your project results through

Total Access

**Have a Question?** 



Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Exxon Global Remed. Grp Project/Site: Everett Terminal - Outfall 01 A TestAmerica Job ID: 490-48456-1

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# **Sample Summary**

Client: Exxon Global Remed. Grp

Project/Site: Everett Terminal - Outfall 01 A

TestAmerica Job ID: 490-48456-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-48456-1	Outfall 01 A-TSS - 1	Wastewater	03/12/14 21:40	03/14/14 08:15
490-48456-4	Outfall 01 A	Wastewater	03/12/14 21:40	03/14/14 08:15

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#### **Case Narrative**

Client: Exxon Global Remed. Grp

Project/Site: Everett Terminal - Outfall 01 A

TestAmerica Job ID: 490-48456-1

Job ID: 490-48456-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative 490-48456-1

#### Receipt

The samples were received on 3/14/2014 8:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.3° C.

#### Except:

A Chain-of-Custody (COC) was not received with these samples and the email to the lab after receipt.

#### **General Chemistry**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### **Organic Prep**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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# **Definitions/Glossary**

Client: Exxon Global Remed. Grp

Project/Site: Everett Terminal - Outfall 01 A

Toxicity Equivalent Quotient (Dioxin)

TestAmerica Job ID: 490-48456-1

### **Glossary**

TEQ

Abbreviation	These commonly used abbreviations may or may not be present in this report.							
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis							
%R	Percent Recovery							
CNF	Contains no Free Liquid							
DER	Duplicate error ratio (normalized absolute difference)							
Dil Fac	Dilution Factor							
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample							
DLC	Decision level concentration							
MDA	Minimum detectable activity							
EDL	Estimated Detection Limit							
MDC	Minimum detectable concentration							
MDL	Method Detection Limit							
ML	Minimum Level (Dioxin)							
NC	Not Calculated							
ND	Not detected at the reporting limit (or MDL or EDL if shown)							
PQL	Practical Quantitation Limit							
QC	Quality Control							
RER	Relative error ratio							
RL	Reporting Limit or Requested Limit (Radiochemistry)							
RPD	Relative Percent Difference, a measure of the relative difference between two points							
TEF	Toxicity Equivalent Factor (Dioxin)							

# **Client Sample Results**

Client: Exxon Global Remed. Grp

Project/Site: Everett Terminal - Outfall 01 A

TestAmerica Job ID: 490-48456-1

Client Sample ID: Outfall 01 A-TSS - 1

Date Collected: 03/12/14 21:40 Date Received: 03/14/14 08:15 Lab Sample ID: 490-48456-1

Matrix: Wastewater

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	8.14		1.43	1.00	mg/L			03/14/14 19:52	1

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# **Client Sample Results**

Client: Exxon Global Remed. Grp

Project/Site: Everett Terminal - Outfall 01 A

TestAmerica Job ID: 490-48456-1

Lab Sample ID: 490-48456-4

**Matrix: Wastewater** 

Client Sample ID: Outfall 01 A Date Collected: 03/12/14 21:40

Date Received: 03/14/14 08:15

General Chemistry						
Analyte	Result Qualifier	RL	MDL Unit	D Prepared	Analyzed	Dil Fac
Oil & Grease (HEM)	<1.53	4.36	1.53 mg/L	03/18/14 11:01	03/18/14 11:01	1

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Client Sample ID: Method Blank

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 148377

Prep Type: Total/NA **Prep Batch: 148377** 

Prep Type: Total/NA

Prep Batch: 148377

Prep Type: Total/NA

Prep Batch: 148377

Prep Type: Total/NA

**Prep Batch: 148377** 

Prep Type: Total/NA

Prep Type: Total/NA

Client Sample ID: Matrix Spike

Client Sample ID: Method Blank

**Client Sample ID: Lab Control Sample** 

Project/Site: Everett Terminal - Outfall 01 A

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: LB 490-148377/2-A

**Matrix: Water** 

Analysis Batch: 148379

LB LB

Result Qualifier RL MDL Unit D Prepared Dil Fac Analyte Analyzed 4.00 03/18/14 11:01 03/18/14 11:01 Oil & Grease (HEM) <1.40 1.40 mg/L

Lab Sample ID: MB 490-148377/1-A

**Matrix: Water** 

Analysis Batch: 148379

мв мв

Result Qualifier Analyte RL MDL Unit Prepared Analyzed Dil Fac Oil & Grease (HEM) <1.40 4.00 1.40 mg/L 03/18/14 11:01 03/18/14 11:01

Lab Sample ID: LCS 490-148377/3-A

**Matrix: Water** 

Analysis Batch: 148379

Spike LCS LCS %Rec. Added Result Qualifier Unit D %Rec Limits Oil & Grease (HEM) 41.7 37.50 mg/L 78 - 114

Lab Sample ID: LCSD 490-148377/4-A

**Matrix: Water** 

Analysis Batch: 148379

LCSD LCSD Spike %Rec. RPD Added Analyte Result Qualifier Unit %Rec Limits Limit Oil & Grease (HEM) 41.7 37.50 mg/L 90 78 114

Lab Sample ID: 490-48395-D-1-A MS

**Matrix: Water** 

Analysis Batch: 148379

Sample Sample Spike MS MS

%Rec. Added Analyte Result Qualifier Result Qualifier Unit %Rec Limits Oil & Grease (HEM) 43.5 <1.49 39.13 mg/L 90 78 \_ 114

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 490-147930/1

**Matrix: Water** 

Analysis Batch: 147930

мв мв

RLMDL Unit Dil Fac Analyte Result Qualifier Prepared Analyzed **Total Suspended Solids** <0.700 1.00 0.700 mg/L 03/14/14 19:52

Lab Sample ID: LCS 490-147930/2

**Matrix: Water** 

Analysis Batch: 147930

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit D %Rec Limits Total Suspended Solids 101 104.4 mg/L 104 90 - 110

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### **QC Sample Results**

Client: Exxon Global Remed. Grp

Project/Site: Everett Terminal - Outfall 01 A

TestAmerica Job ID: 490-48456-1

%Rec.

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCSD 490-147930/3	Client Sample ID: Lab Control Sample Dup
Matrix: Water	Prep Type: Total/NA

LCSD LCSD

Analysis Batch: 147930

Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Total Suspended Solids	101	97.80		mg/L	_	97	90 - 110	7	20

Spike

Lab Sample ID: 490-48444-F-5 DU Client Sample ID: Duplicate
Matrix: Water Prep Type: Total/NA

Analysis Batch: 147930

	Sample	Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
Total Suspended Solids	12.3		13.17		mg/L		7	20

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RPD

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# **QC Association Summary**

Client: Exxon Global Remed. Grp Project/Site: Everett Terminal - Outfall 01 A TestAmerica Job ID: 490-48456-1

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### **General Chemistry**

### Analysis Batch: 147930

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-48444-F-5 DU	Duplicate	Total/NA	Water	SM 2540D	
490-48456-1	Outfall 01 A-TSS - 1	Total/NA	Wastewater	SM 2540D	
LCS 490-147930/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 490-147930/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
MB 490-147930/1	Method Blank	Total/NA	Water	SM 2540D	

### **Prep Batch: 148377**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
490-48395-D-1-A MS	Matrix Spike	Total/NA	Water	1664A	
490-48456-4	Outfall 01 A	Total/NA	Wastewater	1664A	
LB 490-148377/2-A	Method Blank	Total/NA	Water	1664A	
LCS 490-148377/3-A	Lab Control Sample	Total/NA	Water	1664A	
LCSD 490-148377/4-A	Lab Control Sample Dup	Total/NA	Water	1664A	
MB 490-148377/1-A	Method Blank	Total/NA	Water	1664A	

### Analysis Batch: 148379

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-48395-D-1-A MS	Matrix Spike	Total/NA	Water	1664A	148377
490-48456-4	Outfall 01 A	Total/NA	Wastewater	1664A	148377
LB 490-148377/2-A	Method Blank	Total/NA	Water	1664A	148377
LCS 490-148377/3-A	Lab Control Sample	Total/NA	Water	1664A	148377
LCSD 490-148377/4-A	Lab Control Sample Dup	Total/NA	Water	1664A	148377
MB 490-148377/1-A	Method Blank	Total/NA	Water	1664A	148377

TestAmerica Nashville

#### **Lab Chronicle**

Client: Exxon Global Remed. Grp

Project/Site: Everett Terminal - Outfall 01 A

Client Sample ID: Outfall 01 A-TSS - 1

TestAmerica Job ID: 490-48456-1

Lab Sample ID: 490-48456-1

Matrix: Wastewater

Date Collected: 03/12/14 21:40 Date Received: 03/14/14 08:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540D		1	700 mL	1000 mL	147930	03/14/14 19:52	PHB	TAL NSH

Client Sample ID: Outfall 01 A Lab Sample ID: 490-48456-4

Date Collected: 03/12/14 21:40 Matrix: Wastewater

Date Received: 03/14/14 08:15

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	1664A		1	880 mL	960 mL	148379	03/18/14 11:01	BAD	TAL NSH
Total/NA	Prep	1664A			880 mL	960 mL	148377	03/18/14 11:01	BAD	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

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# **Method Summary**

Client: Exxon Global Remed. Grp

Project/Site: Everett Terminal - Outfall 01 A

TestAmerica Job ID: 490-48456-1

Method	Method Description	Protocol	Laboratory
1664A	HEM and SGT-HEM	1664A	TAL NSH
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL NSH

#### Protocol References:

1664A = EPA-821-98-002

SM = "Standard Methods For The Examination Of Water And Wastewater",

#### Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

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TestAmerica Job ID: 490-48456-1

Client: Exxon Global Remed. Grp Project/Site: Everett Terminal - Outfall 01 A

### **Laboratory: TestAmerica Nashville**

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date 12-31-15 07-24-14	
A2LA	ISO/IEC 17025		0453.07		
Alaska (UST)	State Program	10	UST-087		
Arizona	State Program	9	AZ0473	05-05-14	
Arizona	State Program	9	AZ0473	05-05-14 *	
Arkansas DEQ	State Program	6	88-0737	04-25-14 *	
California	NELAP	9	1168CA	10-31-14	
Connecticut	State Program	1	PH-0220	12-31-15	
Florida	NELAP	4	E87358	06-30-14	
Illinois	NELAP	5	200010	12-09-14	
lowa	State Program	7	131	05-01-14	
Kansas	NELAP	7	E-10229	10-31-14	
Kentucky (UST)	State Program	4	19	06-30-14	
Louisiana	NELAP	6	30613	06-30-14	
Maryland	State Program	3	316	03-31-14 *	
Massachusetts	State Program	1	M-TN032	06-30-14	
Minnesota	NELAP	5	047-999-345	12-31-14	
Mississippi	State Program	4	N/A	06-30-14	
Montana (UST)	State Program	8	NA	01-01-20	
Nevada	State Program	9	TN00032	07-31-14	
New Hampshire	NELAP	1	2963	10-10-14	
New Jersey	NELAP	2	TN965	06-30-14	
New York	NELAP	2	11342	04-01-14 *	
North Carolina DENR	State Program	4	387	12-31-14	
North Dakota	State Program	8	R-146	06-30-14	
Ohio VAP	State Program	5	CL0033	10-16-15	
Oklahoma	State Program	6	9412	08-31-14	
Oregon	NELAP	10	TN200001	04-29-14	
Pennsylvania	NELAP	3	68-00585	06-30-14	
Rhode Island	State Program	1	LAO00268	12-30-14	
South Carolina	State Program	4	84009 (002)	02-23-17	
Tennessee	State Program	4	2008	02-23-17	
Texas	NELAP	6	T104704077-09-TX	08-31-14	
USDA	Federal		S-48469	10-30-16	
Utah	NELAP	8	TN00032	07-31-14	
Virginia	NELAP	3	460152	06-14-14	
Washington	State Program	10	C789	07-19-14	
West Virginia DEP	State Program	3	219	02-28-15	
Wisconsin	State Program	5	998020430	08-31-14	
Wyoming (UST)	A2LA	8	453.07	12-31-15	

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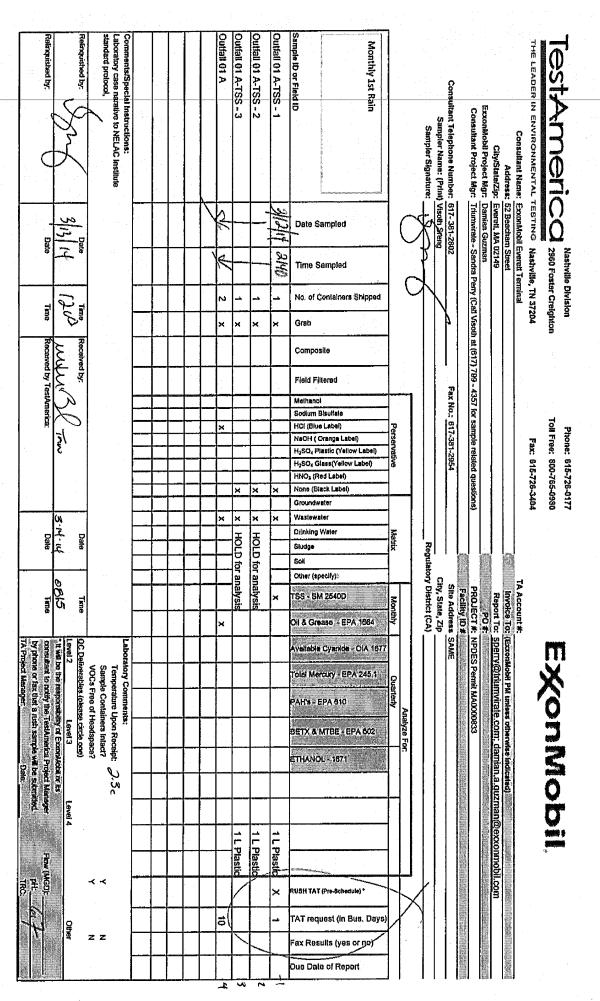
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 $<sup>^{\</sup>star}$  Expired certification is currently pending renewal and is considered valid.

Nashville, TN

Revised 11/28/12

Cooler Received/Opened On 3/14/2014@ 0815 2379 (last 4 digits, FedEx) 1. Tracking # IR Gun ID 12080142 Courier: FedEx 2. Temperature of rep. sample or temp blank when opened: Degrees Celsius 3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO. NA 4. Were custody seals on outside of cooler? .NO...NA If yes, how many and where: 5. Were the seals intact, signed, and dated correctly? ..NO...NA 6. Were custody papers inside cooler? I certify that I opened the cooler and answered questions 1-6 (intial) YES...NO. NA (NO) 7. Were custody seals on containers: YES and Intact Were these signed and dated correctly? YES...NO.ANA 8. Packing mat'l used? Eubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None 9. Cooling process: Other None (Ce) Ice-pack Ice (direct contact) Dry ice 10. Did all containers arrive in good condition (unbroken)? YES.).NO...NA 11. Were all container labels complete (#, date, signed, pres., etc)? (YES)..NO...NA 12. Did all container labels and tags agree with custody papers? YES)..NO...NA 13a. Were VOA vials received? YES..NO..NA b. Was there any observable headspace present in any VOA vial? YES...NO.NA 14. Was there a Trip Blank in this cooler? YES...NO. (MA) If multiple coolers, sequence # I certify that I unloaded the cooler and answered questions 7-14 (intial) MDM 15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO.(NA) (ES)..NO...NA b. Did the bottle labels indicate that the correct preservatives were used 16. Was residual chlorine present? YES...NO..(NA) I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) mam 17. Were custody papers properly filled out (ink, signed, etc)? WES .. NO...NA YES .NO...NA 18. Did you sign the custody papers in the appropriate place? 19. Were correct containers used for the analysis requested? (FES).NO...NA 20. Was sufficient amount of sample sent in each container? YES).NO...NA I certify that I entered this project into LIMS and answered questions 17-20 (intial) I certify that I attached a label with the unique LIMS number to each container (intial) 21. Were there Non-Conformance issues at login? (FES). MOJ.# ₩as a NCM generated? YES #6) C.O.C. received vin E.mail. mom



Loc: 490 48456

Prepared vsreng 01A

### **Login Sample Receipt Checklist**

Client: Exxon Global Remed. Grp Job Number: 490-48456-1

Login Number: 48456 List Source: TestAmerica Nashville

List Number: 1

Creator: McBride, Mike

Greator: McBride, Mike		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.3
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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